

Landfills in Vermont:

Landfills Before and After Act 78

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Landfills in Vermont: Map and Report

*History:*¹

Traditionally, Vermont towns have used central town landfills for disposal of industrial, commercial, and household waste. Over time, however, concern grew about the safety and reliability of these landfills. As they were almost universally unlined, citizens came to worry about the safety of their surface water, groundwater (many Vermonters acquire drinking water from wells), and their soils.

Act 78, passed by the State legislature in 1987, revolutionized the State's system of solid waste management. The Act forced the closing of many unlined dumps and landfills, set up a new administrative system, and appropriated funding for the development of safer solid waste management practices.

Beginning in 1988, older landfills were replaced with more protective lined landfills that are designed to prevent leaching. While all but a few landfills stopped operating as such, many were simply converted into transfer stations or recycling centers, while many others were closed and capped.

Today, only two landfills operate in the State. Due to privatization of both the solid waste and recycling industries, much of the State's waste sits briefly in transfer stations and is then shipped to neighboring states for disposal or incineration, or is sold to be reused.

Most landfills that closed *after* the passage of Act 78 were required to undergo some sort of remediation to ensure the future environmental safety of the site. However, *before* the passage of Act 78, many dozens of landfills were closed without any concern for the future uses

¹ State Auditor's Review of Vermont's Solid Waste Program. Period ending January 31, 1998. URL: http://www.state.vt.us/sao/reviews/sw_report.htm.

of the site. While the more recent sites may still pose a threat, these “historic” sites present the most likely threat to human health for those citizens who live near them.

Although an assessment of sites had already been done, we determined that an abundance of landfills exist that are not currently on Toxics Action Center’s hazard assessment map.²

These landfills closed before 1988 and can be found only in older State records. By mapping these historic landfills, we hope to expand the study of the danger level of these sites.

Landfills in Vermont Map:³

The landfills on the following map come from three categories:

- **Active Solid Waste Landfills**
These sites currently accept solid waste for disposal on site. Most hazardous materials are banned from these sites, but may occasionally be collected for disposal elsewhere. Recyclable materials are discouraged from these sites, as one of the State’s solid waste management objectives is an increase in recycling.
- **Inactive / Closed Since 1988**
These sites are no longer active as landfills. Many have been converted into transfer stations or recycling centers – both of which are temporary storage sites for waste that will be shipped elsewhere. Other sites have simply been closed, but those closed pursuant to Act 78 have undergone environmental hazard remediation of some kind. Some sites were lined and capped with a protective material that prevents the escape of contaminants, but others were left unlined and pose a greater risk of leaching.
- **Inactive / Closed Before 1988**
These sites were no longer active as of the passage of Act 78. They therefore were not required to undergo any environmental assessment or remediation. Most were probably unlined, and some may not have even been capped upon closing. These sites present the most likely threat to human health and environmental contamination.

² Middlebury College’s Fall semester ES 401 class collected this information and produced these maps.

³ "Vermont Ground Water Pollution Source Inventory December, 1980." Agency of Environmental Conservation. Department of Water Resources and Environmental Engineering. Water Quality Division.

A Note on the Data Projection:

The data we collected on historic landfills came from a Vermont Agency of Natural Resources (ANR) report dating to 1980. This causes the coordinates of the landfill facilities to be a concern. It is likely that the latitude and longitude of the historic sites were generated by an older geographic coordinate system known as North American Datum 27 (NAD 27). This datum dates to 1927, and has since been determined to be somewhat skewed and subsequently updated. The coordinate system currently in use for the State's maps is North American Datum 83 (NAD 83). This difference is a concern because it may have caused slight distortion in the projection of the historic landfill data causing some data points to be projected slightly off of their precise location.

Landfill Survey for Addison County:

In order to get a sense of the potential state of some of the closed landfills, a visual assessment was undertaken for select sites in Addison County. Three sites were selected. Two of the selected sites were those owned by their respective towns and used as central rather than private disposal facilities. The third is owned by a major institution in the area (Middlebury College). The sites were then visited and photographed. Following is a description of the current surroundings of these sites:

Bristol:

The Bristol Town landfill is located in a moderately populated part of Bristol town. There are several houses near the site. It sits at the bottom of a hill neighboring a quarry, below the Mt. Abe Union High School. The school's athletic fields are visible from the site.

Lincoln:

The Lincoln Town landfill is now operating as a town recycling facility. The site is located atop a large hill, above the New Haven River. Water flows downhill from the site (to the road), and appears to continue in the direction of the nearby River. The site is located in a moderately populated residential area. One new home is under construction just downhill from the site.

Ripton:

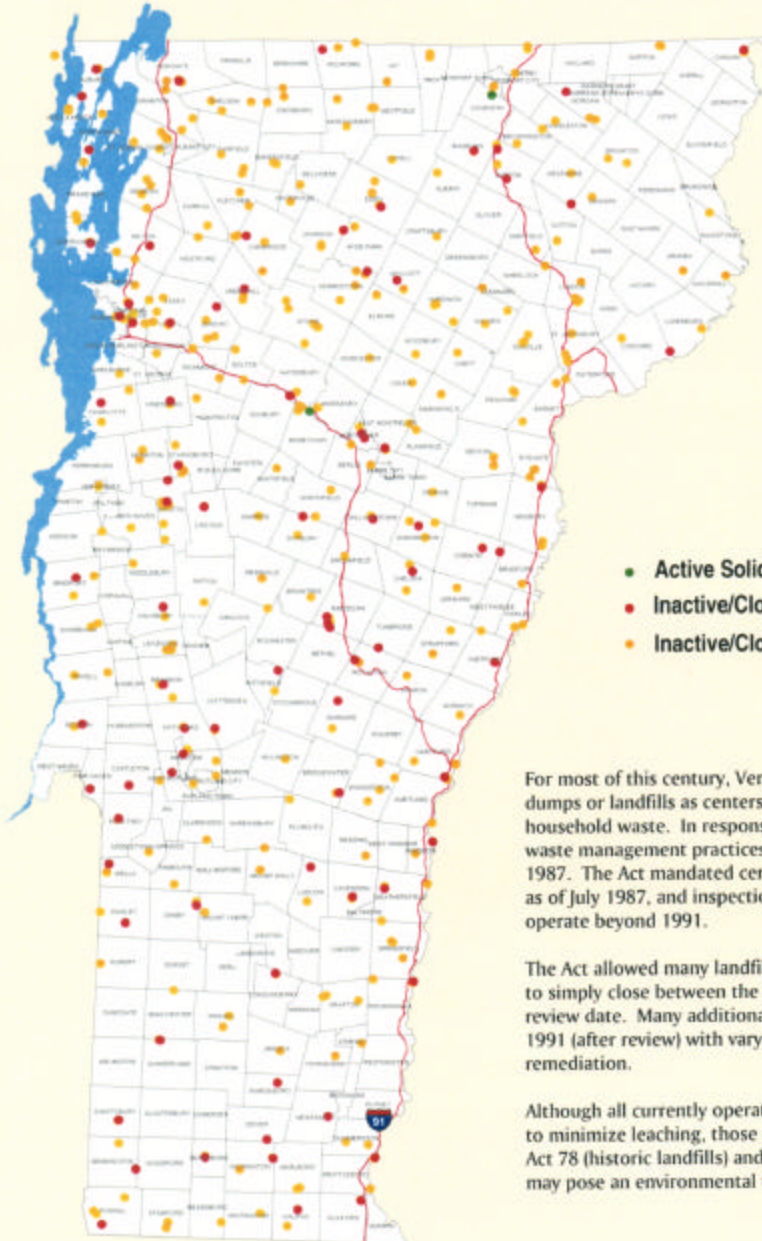
The inactive landfill site in Ripton is owned by Middlebury College. The site is just beyond the Breadloaf campus, at the corner of Route 125 and the Sucker Brook Trail. As it was closed in 1975, it is unlikely that the site was lined. The site is now covered by a young forest. The East Middlebury River runs along the site. There are a few residences near the site, but none appear to be new.

Conclusion:

Attached are three maps – an updated map of landfills in Vermont containing landfills that fall into one of the three aforementioned categories; a map highlighting landfills in Addison County; and an updated map of environmental hazards in Vermont reflecting the additional landfills mapped this spring semester. The Addison County map serves as an example of the types of more local surveys and assessments that can be done for local communities and the other maps serve as more accurate representations of potential environmental hazards in Vermont for the educational and outreach efforts of the Toxics Action Center and the community groups it works with.



Landfills in Vermont

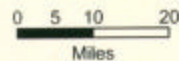


- Active Solid Waste Landfills
- Inactive/Closed Since 1988
- Inactive/Closed Before 1988

For most of this century, Vermont towns have operated dumps or landfills as centers for disposal of industrial and household waste. In response to rising concern about waste management practices, Vermont passed Act 78 in 1987. The Act mandated certification for all new landfills as of July 1987, and inspection of all those continuing to operate beyond 1991.

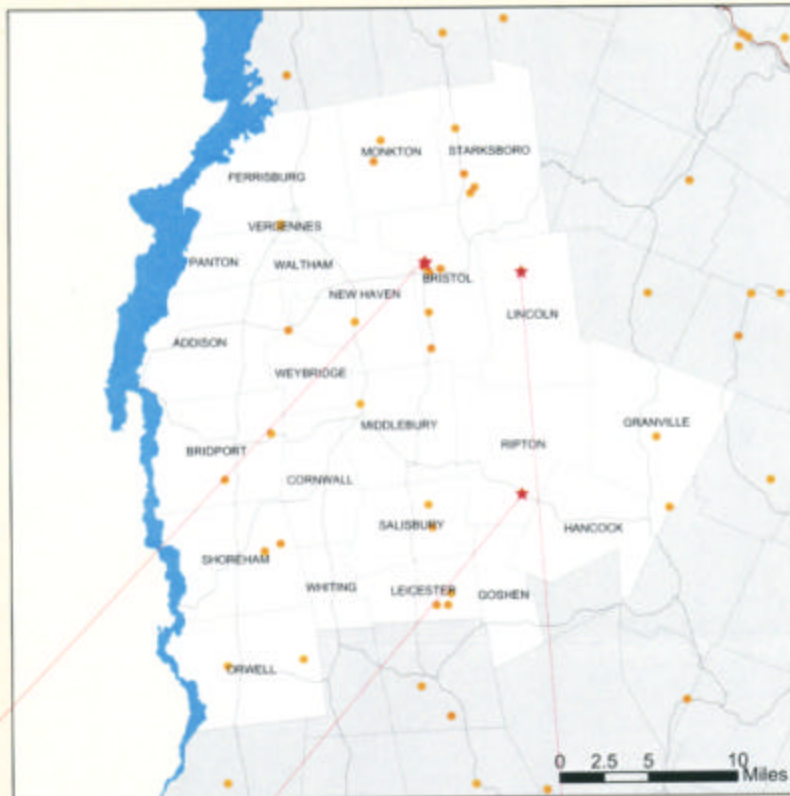
The Act allowed many landfills (especially small landfills) to simply close between the passage of the Act and the review date. Many additional landfills have closed since 1991 (after review) with varying degrees of recommended remediation.

Although all currently operating landfills must now be lined to minimize leaching, those closed before the passage of Act 78 (historic landfills) and those closed before review may pose an environmental threat in some areas.



All data collected from the State of Vermont Agency of Natural Resources: Solid Waste Management Division

Visual Assessment and Survey of Landfills in Addison County



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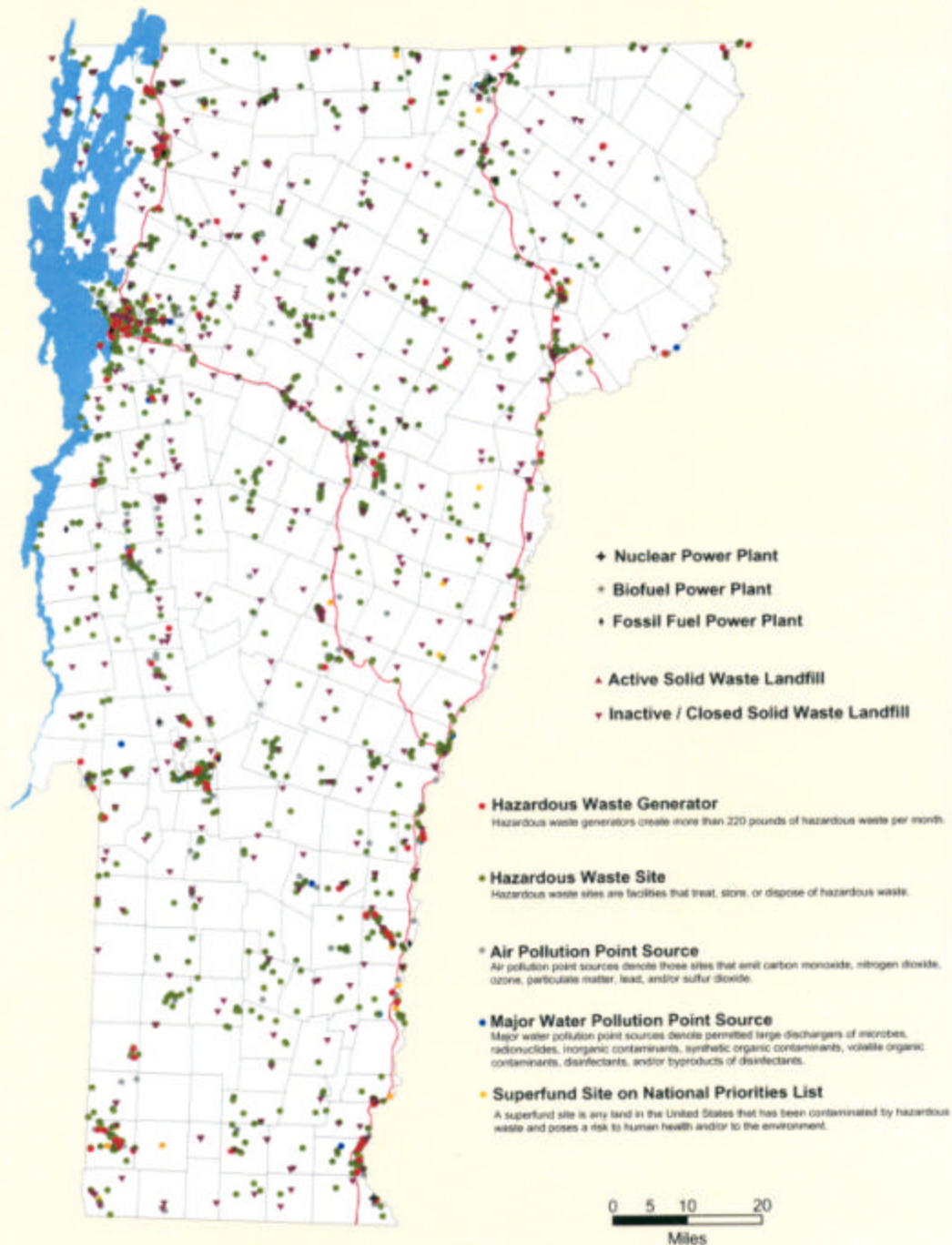
Lincoln Town recycling center.



Former landfill site in Ripton.

Assessments and photos taken by Middlebury College's ES 401 class, May 2004.

Environmental Hazards in Vermont



All data collected from the Environmental Protection Agency, the State of Vermont Agency of Natural Resources, and the Energy Information Administration.